UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,341	02/28/2002	Steven J. Demuth	14023.01	4118

25763	7590	02/10/2005

DORSEY & WHITNEY LLP
INTELLECTUAL PROPERTY DEPARTMENT
50 SOUTH SIXTH STREET
MINNEAPOLIS, MN 55402-1498

EXAMINER
NAHAR, QAMRUN

ART UNIT	PAPER NUMBER
2124	

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/086,341	DEMUTH ET AL.
	Examiner	Art Unit	
	Qamrun Nahar	2124	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>28 February 2002</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-52</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-52</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>28 February 2002</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1. Claims 1-52 have been examined.

Drawings

2.   Figures 1-4 should be designated by a legend such as --Prior Art-- because only that

which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37

CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application.

The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37

CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not

accepted by the examiner, the applicant will be notified and informed of any required corrective

action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3.   Claims 19-29 are objected to because of the following informalities: "The **method** of

claim" should be "The **computer program product** of claim". Appropriate correction is

required.

4.   Claims 31-40 are objected to because of the following informalities: "The **method** of

claim" should be "The **system** of claim". Appropriate correction is required.

5.   Claim 46 is objected to under 37 CFR 1.75(c), as being of improper dependent form for

failing to further limit the subject matter of a previous claim. Applicant is required to cancel the

claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the

claim(s) in independent form. Claim 46 is a duplicate of claim 40.

6.   Claims 45-46 are objected to because of the following informalities: "The method of

claim **40**" should be "The method of claim **41**". Appropriate correction is required.

Claim Rejections - 35 USC § 112

7.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

8.   Claims 7-8, 12, 14, 21-22, 24-25, 27, 30-40, 43, 45-46 and 48-52 are rejected under 35

U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and

distinctly claim the subject matter which applicant regards as the invention.

9.   Claim 7 recites the limitation "the method calls" in line 3 of the claim. There is

insufficient antecedent basis for this limitation in the claim. Therefore, this limitation is

interpreted as "the method invocations".

10.   Claims 8 and 22 recite the limitation "the state" in line 4 of the claims. There is

insufficient antecedent basis for this limitation in the claims. Therefore, this limitation is

interpreted as "a state".

11.   Claims 12, 21, 33 and 43 recite the limitation "the root entity bean" in line 3 of the

claims. There is insufficient antecedent basis for this limitation in the claims. Therefore, this

limitation is interpreted as "a root entity bean".

12.   Claims 12, 21, 33 and 43 recite the limitation "the light-weight class" in line 7 of the

claims. There is insufficient antecedent basis for this limitation in the claims. Therefore, this

limitation is interpreted as "a light-weight class".

13.   Claims 14, 25 and 45 recite the limitation "version of the corresponding objects" in line 4

of the claims. There is insufficient antecedent basis for this limitation in the claims. Therefore,

this limitation is interpreted as "version of corresponding objects".

14.   Claim 24 recites the limitation "the fifth instruction" in line 1 of the claim. There is

insufficient antecedent basis for this limitation in the claim. Therefore, this limitation is

interpreted as "the fifth instructions".

15.   Claim 27 recites the limitation "the Java application" in line 3 of the claim. There is

insufficient antecedent basis for this limitation in the claim. Therefore, this limitation is

interpreted as "the Java applications".

16.   Claim 30 recites the limitation "the plurality of method calls" in lines 17-18 of the claim.

There is insufficient antecedent basis for this limitation in the claim. Therefore, this limitation is

interpreted as "a plurality of method calls".

Claims 31-40 and 45-46 are rejected for dependency upon rejected base claim 30 above.

17.   Claim 30 ends with the recitation "graph;" on line 19 of the claim, which renders the

claim indefinite because it is incomplete and missing a period.

Claims 31-40 and 45-46 are rejected for dependency upon rejected base claim 30 above.

18.   Claim 33 recites the limitation "the instructions" in line 1 of the claim. There is

insufficient antecedent basis for this limitation in the claim. Therefore, this limitation is

interpreted as "instructions".

19.   Claim 33 recites the limitation "the at least one root" in line 3 of the claim. There is

insufficient antecedent basis for this limitation in the claim. Therefore, this limitation is

interpreted as "at least one root".

20.   Claim 33 recites the limitation "the degree of traversal" in line 6 of the claim. There is

insufficient antecedent basis for this limitation in the claim. Therefore, this limitation is

interpreted as "at least one degree of traversal from the root object".

21.   Claim 48 recites the limitation "the method calls" in line 10 of the claim. There is

insufficient antecedent basis for this limitation in the claim. Therefore, this limitation is

interpreted as "the method invocations".

Claims 49-52 are rejected for dependency upon rejected base claim 48 above.

22.   Claim 52 recites the limitation "the dynamic proxy" in lines 1-2 of the claim. There is

insufficient antecedent basis for this limitation in the claim. Therefore, this limitation is

interpreted as "a dynamic proxy".

Claim Rejections - 35 USC § 101

23.   35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or
any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
requirements of this title.

24.   Claim 47 is rejected under 35 U.S.C. 101 because the claimed invention is directed to

non-statutory subject matter.

As per claim 47, merely claimed as a program representing a computer listing *per se*

(object-oriented programming model), that is, descriptions or expressions of such a program and

that is, descriptive material *per se*, non-functional descriptive material, and is not statutory

because it is not a physical "thing" nor a statutory process, as there are not "acts" being

performed. Such claimed programs do not define any structural and functional interrelationships

between the program and other claimed aspects of the invention which permit the program's

functionality to be realized. Since a computer program is merely a set of instructions capable of

being executed by a computer, the program itself is not a process, without the computer-readable

medium needed to realize the program's functionality. In contrast, a claimed computer-readable

medium encoded with a program defines structural and functional interrelationships between the

program and the medium which permit the program's functionality to be realized, and is thus

statutory. **Warmerdam**, 33 F.3d at 1361, 31 USPQ2d at 1760. **In re Sarkar**, 588 F.2d 1330,

1333, 200 USPQ 132, 137 (CCPA 1978). See MPEP § 2106(IV)(B)(1)(a).

Claim Rejections - 35 USC § 102

25.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

26.   Claims 1-52 are rejected under 35 U.S.C. 102(e) as being anticipated by Bennett (U.S.

6,597,366).

Per Claim 1:

The Bennett patent discloses:

**- a computer-implemented method for executing a Java application on a client using data

hosted on an EJB server** (column 2, lines 17-31)

- generating an object graph descriptor; creating a light-weight object graph, based on the

object graph descriptor, the light-weight object graph being a subset of a domain object

graph on the EJB server; transporting the light-weight object graph to the client (column

10, lines 4-25)

- executing the Java application on the client; monitoring a plurality of method invocations

performed on the client that interact with the light-weight object graph; logging a subset of

method invocations of the plurality of method invocations that result in a change to the

light-weight object graph in a stack; and persisting changes to the domain object graph on

the EJB server (column 10, lines 26-38).

Per Claim 2:

The Bennett patent discloses:

- wherein transporting of the light-weight object graph includes serializing the light-weight

object graph on the EJB server into a byte-stream, communicating the byte-stream to the

client, and deserializing the byte-stream on the client (column 10, lines 60-67 to column 11,

lines 1-3).

Per Claim 3:

The Bennett patent discloses:

- **wherein the object graph descriptor identifies at least one root object and at least one degree of traversal from the root object** (column 10, lines 4-10).

Per Claim 4:

The Bennett patent discloses:

- **wherein the Java application is a Java graphical user interface application** (column 4, lines 65-67 to column 5, lines 1-10).

Per Claim 5:

The Bennett patent discloses:

- **wherein the monitoring step is performed using a dynamic proxy** (column 9, lines 66-67 to column 10, lines 1-3).

Per Claim 6:

The Bennett patent discloses:

- **wherein the monitoring step includes the dynamic proxy receiving a method call, the proxy executing the method call on an object in the light-weight object graph, and the proxy determining if the object changed as a result of the method call** (column 9, lines 66-67 to column 10, lines 1-3).

Per Claim 7 (as best understood):

      The Bennett patent discloses:

- wherein persisting the changes to the domain object graph on the EJB server includes communicating the stack to the EJB server and executing the method invocations thereon (column 10, lines 32-38).

Per Claim 8 (as best understood):

      The Bennett patent discloses:

- further including placing at least one flag in the stack and generating a corresponding snapshot of the light-weight object graph, prior to operation of the method invocation immediately following the flag, such that a user could cause a state of each of a plurality of objects in the light-weight object graph to return to a previous state (column 10, lines 20-25).

Per Claim 9:

      The Bennett patent discloses:

- **wherein executing a Java application on the client includes generating a container aware model adapted to allow the Java application to retrieve data from the light-weight objects embedded in the light-weight object graph** (column 10, lines 4-10).

Per Claim 10:

The Bennett patent discloses:

- **wherein executing a Java application on the client includes creating a form in communication with the light-weight object graph through the container aware model** (column 10, lines 4-10).

Per Claim 11:

The Bennett patent discloses:

- **wherein the container aware model is created by extending a standard Java Swing model** (column 10, lines 4-10).

Per Claim 12 (as best understood):

The Bennett patent discloses:

- **wherein creating a light-weight object graph includes: locating a root entity bean specified by the at least one root object in the domain object graph; locating at least one**

related entity bean in the domain object graph, as specified by the degree of traversal; and

returning a first implementation of a light-weight class from which the root entity bean

inherits and a second implementation of the light-weight class from which the related entity

bean inherits (column 6, lines 36-67 to column 7, lines 1-32).

Per Claim 13:

The Bennett patent discloses:

- wherein the first implementation and the second implementation are generated by an

object provider (column 6, lines 36-67 to column 7, lines 1-32).

Per Claim 14 (as best understood):

The Bennett patent discloses:

- further including extending the light-weight object graph, based on an extension request

from the client identifying an extension root and an extension degree of traversal, creating

a light-weight version of corresponding objects, and transporting the corresponding objects

to the client (column 10, lines 26-31).

Per Claim 15:

The Bennett patent discloses:

- wherein the domain object graph on the EJB server includes a collection of heavy-weight

entity beans and the entity beans are created from: a foundational light-weight object class

specifying a set of states and a set of behaviors associated with a set of light-weight objects;

at least one specific light-weight object class specifying a second set of states and set of

behaviors associated with the specific light-weight object class, the specific light-weight

object class inheriting from the foundational light-weight object class; and at least one

instance of the at least one specific light-weight object class, the at least one instance

including information corresponding to the first and second set of states (column 6, lines 36-

67 to column 7, lines 1-32).

Per Claim 16:

The Bennett patent discloses:

- wherein the Java graphical user interface application is a Java Swing application (column

10, lines 4-10).

Per Claim 17:

The Bennett patent discloses:

- wherein the Java Swing application is a container-aware Java Swing application (column

10, lines 4-10).

Per Claims 18-20, 21-22 (as best understood), 23, 25 (as best understood) & 28-29:

These are computer program product versions of the claimed method discussed above

(claims 1-3, 12, 8, 7, 14, 6 and 15, respectively), wherein all claim limitations also have been

addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are

also anticipated by Bennett.

Per Claim 24 (as best understood):

The Bennett patent discloses:

- wherein the fifth instructions include instruction for creating a session bean responsible

for executing the method calls in the stack on the EJB server (column 10, lines 32-38).

Per Claim 26:

The Bennett patent discloses:

- further including sixth instructions for defining a set of container-aware Java graphical

user interface applications (column 4, lines 65-67 to column 5, lines 1-10).

Per Claim 27 (as best understood):

The Bennett patent discloses:

- further including instructions for defining a container-aware model, as an extension of a standard Java Swing model, the container-aware model adapted to allow the Java applications to retrieve data from a plurality of light-weight objects embedded in the light-weight object graph (column 10, lines 4-10).

Per Claims 30-40 (as best understood):

These are system versions of the claimed method discussed above (claims 1, 7, 3, 12, 2, 4, 5, 6, 9, 10 and 15, respectively), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also anticipated by Bennett.

Per Claim 41:

This is another version of the claimed method discussed above (claims 1 and 3), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also anticipated by Bennett.

Per Claims 42, 43 (as best understood), 44 & 45-46 (as best understood):

These are another versions of the claimed method discussed above (claims 2, 12, 13, 14 and 15, respectively), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also anticipated by Bennett.

Per Claim 47:

This is a model version of the claimed method discussed above, claim 15, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above, including "at least one entity bean including a third set of behaviors, the entity bean inheriting from the at least one instance" (column 9, lines 35-45). Thus, accordingly, this claim is also anticipated by Bennett.

Per Claim 48 (as best understood):

This is another version of the claimed method discussed above (claims 1 and 7), wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also anticipated by Bennett.

Per Claim 49 (as best understood):

The Bennett patent discloses:

- wherein transporting of the stack includes serializing the plurality of method invocations into a byte-stream, communicating the byte-stream to the EJB server, and deserializing the byte-stream on the EJB Server (column 10, lines 60-67 to column 11, lines 1-3).

Per Claim 50 (as best understood):

The Bennett patent discloses:

- wherein the method invocations are executed on the EJB server using a session bean

(column 10, lines 32-38).

Per Claims 51-52 (as best understood):

These are another versions of the claimed method discussed above (claims 5 and 6,

respectively), wherein all claim limitations also have been addressed and/or covered in cited

areas as set forth above. Thus, accordingly, these claims are also anticipated by Bennett.

Conclusion

27.   Any inquiry concerning this communication from the examiner should be directed to

Qamrun Nahar whose telephone number is (571) 272-3730. The examiner can normally be

reached on Mondays through Thursdays from 8:30 AM to 6:00 PM. The examiner can also be

reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kakali Chaki, can be reached on (571) 272-3719. The fax phone number for the

organization where this application or processing is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 305-3900.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

QN
February 4, 2005

KAKALI CHAKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100